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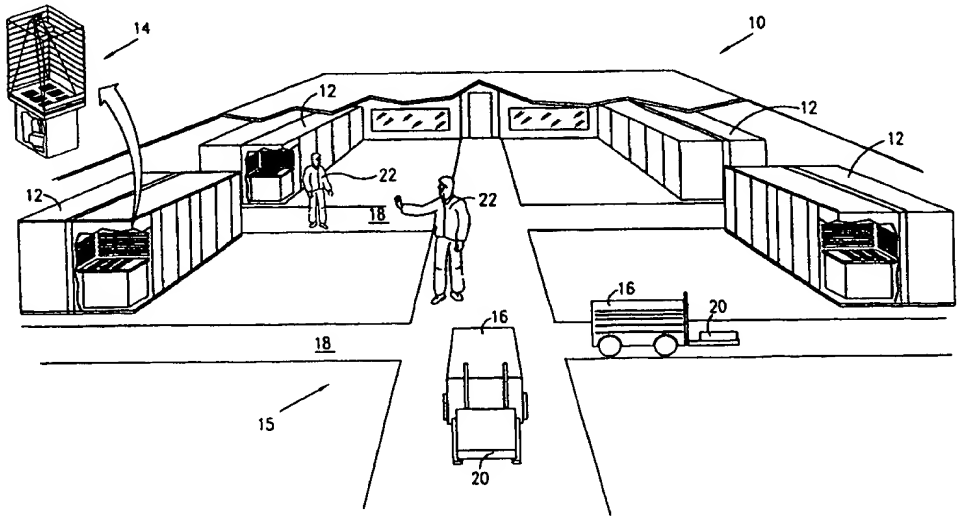

(57) Abstract

Method and apparatus for manufacture and inspection of flat articles, such as flat planel display substrates, that are manufactured in a contamination–sensitive environment. In particular, a manufacturing step such as applying coatings to the article is performed in a self–contained micro–environment, typically characterized by an airborn particulate concentration which is substantially lower than its surroundings. Automated inspection apparatus is provided inside the self–contained micro–environment of the fabrication equipment to inspect the article after completion of the fabrication step and before transfer of the article to other fabrication equipment. The inspection apparatus includes an illumination subsystem illuminating the article with various configurations of dark field and bright field illumination, a staring array sensor capturing images of the article under various illumination configurations and a computer that analyzes the images to automatically detect defects.